

## INTERNATIONAL SEARCH REPORT

Internal Application No  
PCT/FR 03/00207A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F16L11/11

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F16L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	GB 2 300 683 A (UPONOR LTD) 13 November 1996 (1996-11-13) page 9, line 15 - line 23; claims 3,4; figures ---	1-8
Y	EP 1 101 994 A (TOKAI RUBBER IND LTD) 23 May 2001 (2001-05-23) page 2, line 17 - line 19 page 3, line 35 - line 37 ---	1-3,5,7, 8
Y	US 5 570 711 A (WALSH BRIAN J) 5 November 1996 (1996-11-05) abstract column 2, line 19 - line 28; claim 1 ---	4 -/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

3 June 2003

Date of mailing of the international search report

13/06/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5618 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl  
Fax: (+31-70) 340-3016

Authorized officer

Budtz-Olsen, A

## INTERNATIONAL SEARCH REPORT

Internat Application No  
PCT/FR 03/00207

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 3 916 505 A (WHITE JOSEPH) 4 November 1975 (1975-11-04) abstract column 1, line 5 - line 12 -----	6
A	US 5 588 468 A (PFLEGER WOLFGANG) 31 December 1996 (1996-12-31) column 4, line 61 - line 63; claims 7,13 -----	1-5,7,8

## INTERNATIONAL SEARCH REPORT

Information on patent family members

Internal Application No

PCT/FR 03/00207

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
GB 2300683	A	13-11-1996	GB	2300684 A , B		13-11-1996
EP 1101994	A	23-05-2001	JP	2001208249 A		03-08-2001
			EP	1101994 A2		23-05-2001
US 5570711	A	05-11-1996	BR	9506981 A		16-09-1997
			DE	19581554 T0		07-05-1997
			GB	2301417 A , B		04-12-1996
			JP	2960170 B2		06-10-1999
			JP	9509626 T		30-09-1997
			WO	9523685 A1		08-09-1995
US 3916505	A	04-11-1975	AT	318327 B		10-10-1974
			AT	327631 B		10-02-1976
			AT	709873 A		15-04-1975
			BE	768006 A1		03-11-1971
			CA	938567 A1		18-12-1973
			DE	2125104 A1		30-12-1971
			DE	2166576 A1		01-08-1974
			DK	135793 B		27-06-1977
			FR	2093979 A1		04-02-1972
			GB	1303507 A		17-01-1973
			NL	7107326 A		06-12-1971
			NO	133725 B		08-03-1976
			US	3835891 A		17-09-1974
			ZA	7102922 A		26-01-1972
US 5588468	A	31-12-1996	DE	9319880 U1		17-03-1994
			CA	2138906 A1		24-06-1995
			DE	59408767 D1		28-10-1999
			EP	0659535 A2		28-06-1995
			ES	2136155 T3		16-11-1999
			JP	7214647 A		15-08-1995